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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,784	04/21/2004	Donald M. Connelly JR.	SJO920030101US1	5055

45216 7590 02/18/2005

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EXAMINER

BROUSSARD, COREY M

ART UNIT PAPER NUMBER

2835

DATE MAILED: 02/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/828,784

Applicant(s)

CONNELLY ET AL.

Examiner

Corey M. Broussard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 21 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "receiver" must be shown or the feature canceled from the claim. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6, 8, 9, 11-14, 16, 21, 24, 25, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Pavol (PN 6,445,587). With respect to claim 1, Pavol teaches an enclosure chassis (104); a mounting surface (interior surface of mounting bay 108) coupled to the enclosure chassis, the mounting surface configured to receive a storage device carrier (106) and having a first layer (128) and a second layer (130, 132); and a viscoelastic layer (126) disposed between the first layer and the second layer to reduce vibration propagation throughout the mounting surface.
3. With respect to claim 2, Pavol teaches a receiver (108) secured to the mounting surface (interior surface of mounting bay 108) and configured to retain a first storage device carrier (106) substantially perpendicular to the mounting surface (see Fig. 1).
4. With respect to claim 9, Pavol teaches an enclosure chassis (104); a mounting surface (interior surface of mounting bay 108) coupled to the enclosure chassis, the mounting surface having a first layer (128) and a second layer (130, 132) and a viscoelastic layer (126) disposed between the first layer and the second layer to reduce vibration propagation throughout the mounting surface; a storage device carrier (106) configured to retain a storage device (102) therein; and a receiver (surface of 128)

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secured to the mounting surface, the receiver configured to receive the storage device carrier (see Fig. 2).

5. With respect to claim 3 and 11, Pavol teaches wherein the mounting surface (interior surface of mounting bay 108) is disposed horizontally to retain a storage device carrier in an orientation in which a storage device may be received with a disk of the storage device mounted vertically with respect to the mounting surface (col 5 lines 4-15).

6. With respect to claim 4 and 12, Pavol teaches a second receiver (108) secured to the mounting surface (interior surface of mounting bay 108), the second receiver configured to retain a second storage device carrier (106, see Fig. 1, multiple bays accept multiple carriers).

7. With respect to claim 5 and 13, Pavol teaches wherein the mounting surface (interior surface of mounting bay 108) is configured to receive the first storage device carrier (106) on one side of the mounting surface and the second storage device carrier on an opposite side of the mounting surface (see Fig. 1, the mounting surfaces of the upper and lower rows are on opposite sides).

8. With respect to claim 6 and 14, Pavol teaches the mounting surface (interior surface of mounting bay 108) is disposed to receive the first storage device carrier (106) on one side of the mounting surface and the second storage device carrier on a same side of the mounting surface as the first storage device (see Fig. 1, the mounting surfaces of the same row are on the same side).

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9. With respect to claim 8 and 16, Pavol teaches the storage device (102) is a disk drive (col 3 line 26).

10. With respect to claim 21, the method for reducing vibration is inherent in the structure of Pavol, Pavol teaches providing an enclosure chassis (104) configured to store at least one storage device (102), providing a mounting surface (interior surface of mounting bay 108) coupled to the enclosure chassis, the mounting surface configured for receiving a storage device carrier (106); providing a first layer on the mounting surface (128); providing a second layer on the mounting surface (130, 132); and providing a viscoelastic layer (126) disposed between the first and second layer of the mounting surface for reducing vibration propagation throughout the mounting surface.

11. With respect to claim 24, Pavol teaches an enclosure chassis (104) configured to store at least one storage device (102), and a mounting surface (interior surface of mounting bay 108) coupled to the enclosure chassis, the mounting surface configured to receive a storage device carrier (106) and having a damping means (foam laminates comprising of elements 126, 128, and shelves 130, 132) for damping the vibrational energy generated by the storage device and received by the mounting surface.

12. With respect to claim 25, Pavol teaches wherein the damping means comprises a first layer (128), a second layer (130, 132), and a viscoelastic layer (126) between the first layer and the second layer.

13. With respect to claim 27, Pavol teaches a receiving means (col 5 lines 65-66 col 6 lines 1-2) coupled to the mounting surface (interior surface of mounting bay 108) for receiving a storage device carrier (106) onto the mounting surface.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 7, 15, 22, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pavol (PN 6,445,587) in view of Polch et al. (PN 5,858,509). With respect to claim 7 and 15, Pavol teaches the device as applied to claim 1 and 9 above, but lacks a viscoelastic layer disposed in the enclosure chassis. Polch teaches an enclosure (9) for storing at least one storage device (8), comprising a viscoelastic layer (36, 38, 39, 40 are preferably 3M's ISD 112, see col 4 lines 19-20, see also attached reference from 3M's online catalog describing ISD 112 as a viscoelastic polymer) disposed between a first layer (28) and a second layer (26) of the enclosure chassis (see Fig. 2). It would have been obvious to a person of ordinary skill in the art to combine the mounting shelf of Polch with the mounting enclosure of Pavol to obtain a drive mounting system for the benefit of increased vibration attenuation.

16. With respect to claim 22, Pavol teaches the method of claim 21 above, but lacks a viscoelastic layer disposed between the layers of the chassis. The method of reducing vibration is inherent in the structure of Polch, Polch teaches providing a first layer (28) on the enclosure chassis (9); providing a second layer (26) on the enclosure chassis; and providing a viscoelastic layer (36, 38, 39, 40 are preferably 3M's ISD 112,

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see col 4 lines 19-20, see also attached reference from 3M's online catalog describing ISD 112 as a viscoelastic polymer) disposed between the first and second layer of the enclosure chassis (see Fig. 2), for reducing vibration propagation throughout the enclosure chassis. It would have been obvious to a person of ordinary skill in the art to combine the mounting shelf of Polch with the mounting enclosure of Pavol to obtain a drive mounting system for the benefit of increased vibration attenuation.

17. With respect to claim 26, Pavol teaches the device as applied to claim 25 above, but lacks where the viscoelastic layer is a damping adhesive. Polch teaches using an acrylic adhesive layer (see col 4 lines 19-20, see also attached reference from 3M's online catalog describing ISD 112 as a viscoelastic damping polymer). It would have been obvious to a person of ordinary skill in the art to use any available suitable material for the viscoelastic layer of Pavol, such as the acrylic adhesive suggested by Polch for the benefit of a damping means that bonds itself to a surface thereby simplifying construction.

18. Claims 10, 17, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pavol (PN 6,445,587) in view of Anderson at al. (PN 6,209,842). With respect to claim 10, Pavol teaches the device as applied to claim 9 above, but lacks a clip on spring. Anderson teaches a spring (405, 600) configured to resiliently couple a storage device carrier (400) to a receiver (401 and 403). Anderson does not specifically teach a clip-on spring, but does state other mounting means may be used (col 4 lines 65-67). It would have been obvious to a person or ordinary skill in the art to combine the drive mounting system of Pavol with the laminated damping device of

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Anderson, utilizing any mounting means well know and old in the art such as a clip-on means, for the benefit of increased protection from vibrations.

19. With respect to claim 17, Anderson teaches wherein the clip-on spring (405, 600) comprises at least three layers (601, 603, 605) including at least one viscoelastic layer (605, see Fig. 6 and col 4 lines 35-36).

20. With respect to claim 23, Pavol teaches the method as applied to claim 21 above, but lacks a clip-on damped spring. The method for reducing vibration is inherent in the structure of Anderson. Anderson teaches providing a storage device carrier (400) for retaining a storage device, securing a receiver (401, 403) to the mounting surface for receiving the storage device carrier; and coupling at least one damped spring (405, 600) to the storage device carrier, for resiliently coupling the storage device carrier to the receiver. Anderson does not specifically teach a clip-on spring, but does state other mounting means may be used (col 4 lines 65-67). It would have been obvious to a person of ordinary skill in the art to combine the drive mounting system of Pavol with the laminated damping device of Anderson, utilizing any mounting means well know and old in the art such as a clip-on means, for the benefit of increased protection from vibrations.

21. Claims 18 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pavol (PN 6,445,587) in view of Bell et al. (PN 6,775,142). With respect to claim 18, Pavol teaches an enclosure chassis (104), a mounting surface (interior surface of mounting bay 108) coupled to the enclosure chassis, the mounting surface having a first layer (128) and a second layer (130, 132) and a viscoelastic layer (126) disposed

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between the first layer and the second layer to reduce vibration propagation throughout the mounting surface; a storage device carrier (106) including a bezel (114), the storage device carrier configured to retain a storage device (102) therein, the storage device having a storage device carrier interface (138). Pavol lacks a key removably secured on the bezel. Bell teaches a key (24, 21) removably secured to at least one of two positions on the bezel (see Fig. 3), such that placement of the key into one of the two positions prevents the storage device carrier interface from contacting an incompatible interface upon inserting the storage device carrier into the enclosure chassis (see Fig. 3, 9, 10). It would have been obvious to a person of ordinary skill in the art to combine the drive vibration attenuation system of Pavol with the key system of Bell to obtain a drive system where the device carriers are selectively keyed to fit selected bays for the benefit of a system that prevents a user from inadvertently matching one device type with an incompatible type and also provides vibration attenuation.

22. With respect to claim 28, Pavol teaches the device as applied to claim 24 above, but lacks a bezel configured to lock the carrier and a keying means. Bell teaches a bezel (front end of 120, see Fig. 3) secured to the storage device carrier (120) and configured to lock the drive carrier within the enclosure (see Fig. 4, a hooking latch is clearly illustrated as part of the bezel, and in Fig. 9 its interface can be clearly seen); and a keying means (124), attached to the bezel (see Fig. 4), for preventing the storage device carrier, with one type of interface, from contacting an incompatible interface upon inserting the storage device carrier into the enclosure chassis (see Fig. 4, 8, 9, 10). It would have been obvious to a person of ordinary skill in the art to combine the drive

vibration attenuation system of Pavol with the key system of Bell to obtain a drive system where the device carriers are selectively keyed to fit selected bays for the benefit of a system that prevents a user from inadvertently matching one device type with an incompatible type and also provides vibration attenuation.

23. With respect to claim 29, Bell teaches wherein the keying means (124) for keying a storage device carrier (120) comprises a key (24, 21) removably secured to at least one of two positions on the bezel (see Fig. 3), and wherein the placement of the key into one of the two positions prevents the storage device carrier interface from contacting an incompatible interface upon inserting the storage device carrier into the enclosure chassis (see Fig. 4, 8, 9, 10).

24. With respect to claim 30, Bell teaches wherein the keying means for keying a storage device carrier comprises a groove in the enclosure chassis configured to receive the key (see Fig. 5, the key plate 135 may comprise grooves for accepting the keys 24, 21).

25. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pavol (PN 6,445,587) in view of Bell at al. (PN 6,775,142) as applied to claim 18 above, and further in view of Anderson at al. (PN 6,209,842). With respect to claim 19, Pavol as modified by Bell lacks a clip-on spring. Anderson teaches at least one spring (405, 600) coupled to the storage device carrier (400), the spring configured to flexibly couple the storage device carrier to the mounting surface (see Fig. 4). Anderson does not specifically teach a clip-on spring, but does state other mounting means may be used (col 4 lines 65-67). It would have been obvious to a person of ordinary skill in the

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art to combine the keyed drive mounting system of Pavol as modified by Bell with the laminated damping device of Anderson, utilizing any mounting means well know and old in the art such as a clip-on means, for the benefit of increased protection from vibrations.

26. With respect to claim 20, Anderson teaches wherein the clip-on spring (405, 600) comprises at least three layers (601, 603, 605) including at least one viscoelastic layer (605, see Fig. 6 and col 4 lines 35-36).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey M. Broussard whose telephone number is 571 272 2799. The examiner can normally be reached on 7:30-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on 571 272 2092. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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